

STAFF REPORT

THE CORPORATION OF THE TOWN OF COBOURG



Report to:	Mayor and Council Members	Priority:	<input checked="" type="checkbox"/> High <input type="checkbox"/> Low
Submitted by:	Teresa Behan Deputy Director, Community Services tbehan@cobourg.ca	Meeting Type: Open Session <input checked="" type="checkbox"/> Closed Session <input type="checkbox"/>	
Meeting Date:	August 23, 2021		
Report No.:	Community Services-058-21		
Submit comments to Council			

Subject/Title: Lighthouse Walkway Options and Cost Estimate

RECOMMENDATION:

THAT Council provide direction to Staff as to which walkway option, if any, is to proceed to detailed design, and

FURTHER THAT Council approve the necessary budget required to conduct the detailed design of the desired option.

1. STRATEGIC PLAN

NA

2. PUBLIC ENGAGEMENT

NA

3. PURPOSE

To provide information to Council regarding conceptual options for constructing a pedestrian walkway across the east breakwater to join the east pier and the lighthouse as well as cost estimates associated with the construction of each option.

4. ORIGIN AND LEGISLATION

Council resolution # 112-21 dated March 15, 2021 directing Staff to proceed with having a construction cost estimate prepared for a pedestrian walkway to the lighthouse in the amount of \$16,700.

5. BACKGROUND

Staff were directed by Council to include a provisional item in the Request for Quotation document for the harbour infrastructure repairs, for a construction cost estimate as well as an estimate for the detailed design and tender documents for a pedestrian walkway to the lighthouse. The walkway would be constructed on top of the east breakwater and would join the east pier with the lighthouse.

Upon receipt of the quotations for the harbour repairs, Staff put forward a recommendation to Council on February 16, 2021 to proceed with the quotation provided by Shoreplan Engineering including all provisional items except for the lighthouse walkway. The walkway originally was not considered to be related to the necessary repairs for the harbour infrastructure.

Council deferred the decision about the provisional items until March 15, 2021 at which point they decided to proceed with the lighthouse walkway cost estimate at a cost of \$16,700.

It should be noted that the walkway will dead end at the lighthouse with a barrier so as not to permit pedestrians from walking around the rocks surrounding the lighthouse. To extend a walkway around the lighthouse may further encroach in the harbour inlet which is already small. Encroachment would require alterations to the mouth of the harbour to ensure sufficient width and would require substantial costs and permitting through Transport Canada.

6. ANALYSIS

The lighthouse pedestrian walkway options and cost estimate report prepared by Shoreplan Engineering is attached. Figure 1 of the report illustrates the areas considered to be the north segment and the south segment of the walkway.

North Segment (Figure 2):

The north segment involves replacing the deck and concrete cap across the length of this steel sheet pile section that extends between the south end of the east pier and north end of the armour stone breakwater. A parapet wall will be added to the east side to protect pedestrians against wave action during storm events and also provide additional protection for the inner harbour.

South Segment Options:

The south segment has three (3) proposed walkway options that are similar in construction cost. A brief description is provided for the construction of the walkway. For each option, there is also a base scope of work that will be required to repair the breakwater including:

- Removal of cap structure

- Filling of voids under cap structure
- Armour stone placed on either side of timber crib face
- Reinstatement of armour stone cap to cover timber crib

Option 1 (Figure 3): Sheet Piles Full Width

Description of additional materials for walkway

- Sheet piles along the outside of the existing timber cribs
- 8 m concrete deck to cover timber cribs
- Parapet wall on east side to reduce wave overtopping
- Safety railing on west/harbour side

Option 2 (Figure 4): Piled Walkway Half Width

Description of additional materials for walkway

- Armour stone protection over east half of timber crib width
- Parapet wall supported on piles
- 5 m concrete deck
- Safety railing on west/harbour side

Option 3 (Figure 5):

Description of additional materials for walkway

- 4m wide piled (steel) walkway structure, west of timber cribs
- Safety railings on both sides of walkway

7. FINANCIAL IMPLICATIONS/BUDGET IMPACTS

The costs provided in the report are estimates and do not include design fees. It has been recommended that 30% be added for contingency, design, permitting and taxes. A large contingency is required due to the uncertainty of the required fill material under the existing cap that exists over top of the timber cribs.

The 2020 Shoreplan condition assessment report had high level cost estimates for the required repairs for each of the harbour structures. The south segment of the east breakwater was estimated to cost \$1,750,000 to repair. There were no recommended repairs required for the north segment of the east breakwater. The costs estimated for the walkway are illustrated in the table below. The far right column identifies the additional cost on top of the east breakwater repair costs to construct the lighthouse walkway plus 30%.

Option	Cost Estimate per Segment	Total North and South Segments	Cost Above Infrastructure Rehab
North Segment	\$972,000	---	---
South Option 1	\$3,434,000	\$4,406,000	\$2,656,000
South Option 2	\$3,348,000	\$4,320,000	\$2,570,000
South Option 3	\$3,450,000	\$4,422,000	\$2,672,000

8. CONCLUSION

The cost estimate to construct the necessary repairs to rehabilitate the east breakwater is \$1,750,000 without the walkway. To add a pedestrian walkway to the lighthouse from the east pier would cost an additional minimum of \$2,570,000 as outlined in the attached report.

Report Approval Details

Document Title:	Lighthouse Walkway Options Report and Cost Estimate - Community Services-058-21.docx
Attachments:	- 21-3500 CobourgLighthouseWalkwayOptionsFinal 2021 08 12.pdf
Final Approval Date:	Aug 13, 2021

This report and all of its attachments were approved and signed as outlined below:

Tracey Vaughan, Chief Administrative Officer - Aug 13, 2021 - 3:21 PM